

Optimized Blocking Impurity Placement for SiGe HBTs

Abstract of the Disclosure

A high performance SiGe HBT that has a SiGe layer with a peak Ge concentration of at least approximately 20% and a boron-doped base region formed therein having a thickness. The base region includes diffusion-limiting impurities substantially throughout its thickness, at a peak concentration below that of boron in the base region. Both the base region and the diffusion-limiting impurities are positioned relative to a peak concentration of Ge in the SiGe layer so as to optimize both performance and yield.

Figures

Figure 1: A line graph showing the relationship between the number of hours spent on a task and the number of errors made. The x-axis represents 'Hours' (0 to 10) and the y-axis represents 'Errors' (0 to 10). The data points are as follows:

Hours	Errors
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10
10	11